

Claims

- [c1] A coated product comprising:
 - a three-dimensional substrate; and
 - a one hundred percent solids coating applied to said three-dimensional substrate, wherein said coating is applied uniformly on said three-dimensional substrate to form a thin film layer of coating that is 0.001 inches or less thick.
- [c2] The coated product of claim 1, wherein said substrate is wood.
- [c3] The coated product of claim 1, wherein said substrate is a wooden cabinet component.
- [c4] A coated three-dimensional product formed by a process comprising:
 - supplying a coating material comprised of one hundred percent solids material to a dispensing mechanism; and
 - applying said coating material from said coating mechanism to the three-dimensional substrate to provide a uniform thin film coating of said coating material on said three-dimensional substrate.

- [c5] The product of claim 4, wherein said uniform thin film coating has a film thickness 0.0015 inches or less.
- [c6] The product of claim 4, wherein said uniform thin film coating has a film thickness 0.001 inches or less.
- [c7] The product of claim 4, wherein said coating material is UV curable.
- [c8] The product of claim 4, wherein said substrate is comprised of wood.
- [c9] The product of claim 4, wherein said substrate is a cabinet component.
- [c10] The product of claim 4, wherein said process further comprises the step of atomizing said coating material to form an atomization stream.
- [c11] The product of claim 10, wherein said atomization stream is temperature controlled.
- [c12] The product of claim 11, wherein said atomization stream is controlled to be between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit.
- [c13] The product of claim 11, wherein said atomization stream is controlled to be between about 110 degrees Fahrenheit and about 140 degrees Fahrenheit.

- [c14] The product of claim 4, wherein the coating material is comprised of particles having an primary particle size in the range of about 25 microns to 50 microns.
- [c15] The product of claim 4, wherein said coating material comprises a sealer and a topcoat.
- [c16] The product of claim 4, wherein said process further comprising the step of sanding or scuffing said substrate.
- [c17] The product of claim 4, wherein the coating material is applied to said substrate by a high precision spray gun.
- [c18] The product of claim 4, wherein said high precision spray gun is a SATA LP™jet K3™ HVLP Automatic High Performance Spray Gun or a Can-Am #2100 RC Fluid Re-circulation Automatic Spray Gun.
- [c19] The product of claim 4, wherein said process further comprises the step of adding heat to said coating material.
- [c20] The product of claim 19, wherein said coating material is heated to between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit.
- [c21] The product of claim 22, wherein said coating material is

heated to between about 110 degrees Fahrenheit and about 140 degrees Fahrenheit.

[c22] The product of claim 4, wherein said process further comprises the step of providing a pressurized air stream.

[c23] The product of claim 4, wherein said process further comprises the step of heating said pressurized air stream.

[c24] The product of claim 23, wherein said pressurized air stream is heated to between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit.

[c25] The product of claim 23, wherein said heat is supplied from an external source.

[c26] The product of claim 23, wherein the coating material is applied to said substrate by a high precision spray gun and said heat source is a component of said high precision spray gun.

[c27] The product of claim 4, wherein said process further comprises heating said substrate to between about 80 degrees Fahrenheit and about 160 degrees Fahrenheit prior to application of said coating.

[c28] A coated product comprising:
a three-dimensional substrate; and

a uniform thin film coating applied to said substrate, wherein said thin coating film comprises a multi-layer composite coating comprised of one hundred percent solids material, and wherein each of the topcoat and the sealer are applied uniformly on said three-dimensional substrate to form said thin film that is approximately 0.001 inches or less thick.